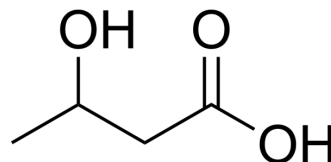


## 3-Hydroxybutyric acid

Cat. No.:	HY-113378
CAS No.:	300-85-6
Molecular Formula:	C <sub>4</sub> H <sub>8</sub> O <sub>3</sub>
Molecular Weight:	104.1
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

In Vitro	0.1 M NaOH : 100 mg/mL (960.61 mM); ultrasonic and adjust pH to 6 with NaOH					
	H <sub>2</sub> O : 50 mg/mL (480.31 mM); Need ultrasonic					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	9.6061 mL	48.0307 mL	96.0615 mL
			5 mM	1.9212 mL	9.6061 mL	19.2123 mL
10 mM			0.9606 mL	4.8031 mL	9.6061 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 25 mg/mL (240.15 mM); Clear solution; Need ultrasonic					

### BIOLOGICAL ACTIVITY

Description	3-Hydroxybutyric acid (β-Hydroxybutyric acid) is a metabolite that is elevated in type I diabetes. 3-Hydroxybutyric acid can modulate the properties of membrane lipids <sup>[1]</sup> .
IC <sub>50</sub> & Target	Human Endogenous Metabolite
In Vitro	3-Hydroxybutyric acid (β-Hydroxybutyric acid) is capable of interacting with lipids (modeled using a DPPC monolayer) and altering phase behavior at clinical concentrations. 3-Hydroxybutyric acid also diminishes the interfacial viscosity of DPPC Monolayers <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### CUSTOMER VALIDATION

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- Cell Metab. 2023 Jan 3;35(1):200-211.e9.
  - Mol Cell. 2023 Aug 11;S1097-2765(23)00605-6.
  - Nat Protoc. 2024 Feb 2.
  - J Nanobiotechnology. 2022 Mar 9;20(1):120.
  - Cells. 2022 Sep 25;11(19):2987.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

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[1]. Hsu TT, et al. 3-Hydroxybutyric acid interacts with lipid monolayers at concentrations that impair consciousness. Langmuir. 2013 Feb 12;29(6):1948-55.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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